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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,563	01/12/2004	Yaw-Ming Tsai	LEE0030-US	8217

7590 12/29/2005  
Michael Bednarek  
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McLean, VA 22102-4859

EXAMINER
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NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	Application No. 10/754,563	Applicant(s) TSAI ET AL.	
	Examiner (Nancy) Thanh-Nhan P. Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 13 and 14 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This communication is responsive to the RCE dated 12/5/2005. Currently, claims 1-6 & 13-14 are pending for the examination; claims 7-12 are canceled.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 3 & 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko U.S. Patent No. 6,570,631.**

Regarding claims 1, 3 & 4, Ko discloses in figure 4C, a liquid crystal display of reduced reflection phenomenon, comprising: a first substrate (100); a switch (T), disposed on said first substrate, for controlling a brightness of said liquid crystal display; a data line (115) having an extension to selectively form source (121)/drains (123) of said switch; a first electrode (117) electrically connected to said data line; an anti-reflection layer (134) of an anti-reflection material, said anti-reflection layer being disposed to contact said data line, wherein said anti-reflection layer has a same pattern as said data line for reducing reflection of said liquid crystal display.

Even though Ko does not disclose in figure 4C a second substrate; a second electrode disposed on said second substrate; and a liquid crystal layer disposed between said second electrode and said switch, it would have been obvious to one ordinary skill in the art to have these basic elements, [see fig. 1 in Ko reference], in

order to complete a liquid crystal display device, and therefore these basic elements do not patentably distinguish the invention.

Similarly, Ko discloses in figure 1 the first electrode formed of Indium Tin Oxide (ITO), and the liquid crystal display comprising a color filter disposed between second substrate and the liquid crystal layer.

**Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ko (6,570,631) in view of Huibers et al U.S. Patent Application Publication No. 2004/0100680.**

**Regarding claim 2**, even though Ko lacks disclosure of anti-reflection material is consisting of chromium oxide, it would have been obvious to one ordinary skill in the art to have anti-reflection material consisting of chromium oxide for having low reflectivity to incident light as evidenced by Huibers, [see par. 0056]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have anti-reflection material consisting of chromium oxide for having low reflectivity to incident light.

**Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ko (6,570,631) in view of Ono et al U.S. Patent Application Publication No. 2005/0041182.**

**Regarding claim 5**, Ko lacks disclosure of a color filter disposed between the switch and said liquid crystal layer, and first electrode being disposed between color filter and the switch.

Ono et al discloses a color filter (FIL) disposed between the switch liquid crystal layer (LC), and first electrode (PX) being disposed between color filter and the switch, [see fig. 9], for the benefit of exhibiting high color purity and high brightness, [see par. 108]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a color filter disposed between the switch and said liquid crystal layer, and first electrode being disposed between color filter and the switch for the benefit of exhibiting high color purity and high brightness.

**Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ko (6,570,631) in view of Zhong et al U.S. Patent No. 6,707,067.**

Regarding claim 6, Ko lacks disclosure of a color filter disposed between said switch and said liquid crystal layer, and said first electrode being disposed between said color filter and said liquid crystal layer.

Zhong et al discloses a color filter (101-103) disposed between the switch and liquid crystal layer, and first electrode (3) being disposed between color filter and liquid crystal layer, [see fig. 6A-6C], where the color filters function as an insulating layer between the pixel electrodes and address lines in the areas of overlap for the benefit of reducing the line-pixel capacitance and being easier to manufacturing the device, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the color filter(s) disposed between the switch and liquid crystal layer, and first electrode being disposed between color filter and liquid crystal layer for the benefit of reducing the line-pixel capacitance and being easier to manufacturing the device.

**Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko (6,570,631) in view of Wu et al U.S. Patent No. 5,773,848, and further in view of Huibers (2004/0100680).**

**Regarding claim 13,** Ko lacks disclosure of a second anti-reflection layer being disposed to contact said gate line, wherein said second anti-reflection layer has a same pattern as said gate line for reducing reflection of said liquid crystal display.

Wu et al discloses an anti-reflection layer (31) of anti-reflection material being disposed on said gate line (29), wherein said second anti-reflection layer has a same pattern as said gate line, [see fig. 12, and claim 1], for the benefit of preventing any reflected laser energy from damaging the gate oxide layer (32), and thus avoiding the large gate leakage current, [see col. 5, lines 34-36]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an anti-reflection layer of anti-reflection material being disposed on said gate line for the benefit of preventing any reflected laser energy from damaging the gate oxide layer and thus avoiding the large gate leakage current.

**Claim 14** is met the discussion regarding claims 13 and 2 as rejection above.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

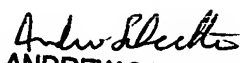
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen  
Examiner  
Art Unit 2871  
-- December 22, 2005 --

TN

  
ANDREW SCHECHTER  
PRIMARY EXAMINER